

"VERSION WITH MARKINGS TO SHOW CHANGES MADE"

Claims 3-21 have been amended as follows:

3. (Amended) The welding process as claimed in ~~either of claims~~ claim 1 ~~and 2~~, wherein the shielding atmosphere is formed by a gas mixture consisting of argon with a content greater than or equal to 70% by volume and of at least one additional compound chosen from H<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub> and N<sub>2</sub> with a content of 0.1 to 30% by volume, preferably a gas mixture consisting of argon with a content greater than or equal to 70% by volume and of 0.1 to 30% by volume of an additional compound chosen from H<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub> and N<sub>2</sub>.

4. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 3~~, wherein the shielding atmosphere is formed by a gas mixture consisting of argon with a content greater than or equal to 70% by volume and of 0.1 to 30% by volume of several additional compounds chosen from H<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub> and N<sub>2</sub>, preferably a mixture of argon, O<sub>2</sub> and CO<sub>2</sub>.

5. (Amended) The welding process as claimed in ~~either of claims~~ claim 1 ~~and 2~~, wherein the shielding atmosphere is formed by a gas mixture consisting of helium with a content greater than or equal to 70% by volume and of at least one additional compound chosen from H<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub> and N<sub>2</sub> with a content of 0.1 to 30% by volume, preferably a gas mixture

consisting of helium with a content greater than or equal to 70% by volume and of 0.1 to 30% by volume of an additional compound chosen from  $H_2$ ,  $O_2$ ,  $CO_2$  and  $N_2$ .

6. (Amended) The welding process as claimed in ~~one of claims~~ claim 1, ~~2 or 5~~, wherein the shielding atmosphere is formed by a gas mixture consisting of helium with a content greater than or equal to 70% by volume and of 0.1 to 30% by volume of several additional compounds chosen from  $H_2$ ,  $O_2$ ,  $CO_2$  and  $N_2$ , preferably a mixture of helium,  $O_2$  and  $CO_2$  and furthermore possibly containing  $H_2$ .

7. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 6~~, wherein the shielding atmosphere is formed by a gas mixture consisting of at least 70% by volume of helium and argon and of 0.1 to 30% by volume of at least one additional compound chosen from  $H_2$ ,  $O_2$ ,  $CO_2$  and  $N_2$ , preferably a gas mixture consisting of 0.1% to 69.9% by volume of helium, of 0.1% to 69.9% by volume of argon and of 0.1 to 30% by volume of at least one additional compound chosen from  $H_2$ ,  $O_2$ ,  $CO_2$  and  $N_2$ , the sum of the argon and helium contents being at least 70% of the total volume of the mixture.

8. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 7~~, wherein the workpiece or workpieces to be welded are made of a metal or a metal alloy chosen from

coated or uncoated steels, particularly assembly steels, HLES steels, carbon steels, steels having a layer of zinc alloy on the surface, stainless steels, aluminum or aluminum alloys and high yield point steels.

9. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 8~~, wherein the shielding atmosphere is formed by a gas mixture consisting of at least 70% by volume of helium and/or argon and of 0.1 to 30% by volume of at least one additional compound chosen from O<sub>2</sub> and CO<sub>2</sub> and wherein the workpiece or workpieces to be welded are made of steel, especially carbon steel.

10. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 8~~, wherein the shielding atmosphere is formed by a gas mixture consisting of at least 70% by volume of helium, of 0.1 to 30% by volume of hydrogen and of 0 to 29.9% by volume of at least one additional compound chosen from O<sub>2</sub> and CO<sub>2</sub>, and wherein the workpiece or workpieces to be welded are made of stainless steel.

11. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 8~~, wherein the shielding atmosphere is formed by a gas mixture consisting of at least 90% by volume of helium or of argon and of 0.1 to 10% by volume of at least one additional compound chosen from O<sub>2</sub> and CO<sub>2</sub>, and wherein the

workpiece or workpieces to be welded are made of aluminum, preferably of at least 96% by volume of helium or argon and of 0.1 to 4% by volume of at least one additional compound chosen from  $O_2$  and  $CO_2$ .

12. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 8~~, wherein the shielding atmosphere is formed by a gas mixture consisting of at least 85% by volume of helium or of argon and of 0.1 to 15% by volume of  $H_2$ , and wherein the workpiece or workpieces to be welded are made of stainless steel, preferably of at least 90% by volume of helium or argon and of 0.1 to 10% by volume of  $H_2$ .

13. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 8~~, wherein the shielding atmosphere is formed by a gas mixture consisting of at least 70% by volume of helium and/or argon and of 0.1 to 30% by volume of  $N_2$ , and wherein the workpiece or workpieces to be welded are made of steel, preferably of at least 80% by volume of helium and/or argon and the balance being  $N_2$ .

14. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 8~~, wherein the shielding atmosphere is formed by a gas mixture consisting of at least 85% by volume of helium and/or argon and of 0.1 to 15% by volume of  $H_2$  and

CO<sub>2</sub>, and wherein the workpiece or workpieces to be welded are made of stainless steel.

15. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 14~~, wherein the laser beam is emitted by an Nd:YAG or CO<sub>2</sub> laser and/or wherein the electric arc is a plasma arc.

16. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 15~~, wherein the electric arc is delivered by a plasma-arc torch and preferably the laser beam and said arc are delivered by a single welding head.

17. (Amended) The welding process as claimed in ~~one of claims~~ claim 1 ~~to 16~~, wherein the electrode is consumable or not consumable.

18. (Amended) Use of a welding process as claimed in ~~one of claims~~ claim 1 ~~to 17~~ for welding at least one tailored blank intended to constitute at least one part of a vehicle body element.

19. (Amended) Use of a welding process as claimed in ~~one of claims~~ claim 1 ~~to 17~~ for joining together, by

welding, metal workpieces having different thicknesses, particularly tailored blanks.

20. (Amended) Use of a welding process as claimed in ~~one of claims~~ claim 1 to 17 for joining together, by welding, metal workpieces having the same or different thicknesses and having different metallurgical compositions or metallurgical grades, particularly tailored blanks.

21. (Amended) Use of a welding process as claim ~~in~~ ~~claims~~ claim 1 to 17 for joining together, by welding, the two longitudinal edges of a pre-tube.

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